

REMARKS

This Amendment is filed in response to the Final Office Action mailed July 1st, 2005. All objections and rejections are respectfully traversed.

Claims 1-33 are pending in the case.

No new claims have been added.

No claims have been amended.

Claim Rejections – 35 U.S.C. §101

At paragraphs 1 and 2 of the Final Office Action, claim 33 was rejected under 35 U.S.C. §101 as directed to non-statutory subject matter, specifically as directed to electromagnetic signals.

The Applicant respectfully asserts that claim 33 is not directed toward non-statutory subject matter, but rather a practical application of electromagnetic energy. The Applicant respectfully directs the Examiner's attention to MPEP 2106 (IV)(B)(1)(c) which states "[h]owever, a signal claim directed to a practical application of electromagnetic energy is statutory regardless of its transitory nature. *See O'Reilly*, 56 U.S. at 114-19; *In re Breslow*, 616 F.2d 516, 519-21, 205 USPQ 221, 225-26 (CCPA 1980)." MPEP 8th edition, Revision 2.

The Applicant seeks to protect electromagnetic signals carrying computer instructions for execution on a processor. In an age of widespread digital downloads, an electromagnetic signal claim is particularly relevant. Users commonly download firmware and drivers from Internet sites that modify or give new capabilities to devices they already own. Such firmware and drivers are embodied in downloadable code that is trans-

ferred across a network as electromagnetic signals. One can envision an entity offering a download that configures a user's device to perform the Applicant's novel invention. Accordingly, claim 33 is directed to this type of infringement, making an entity that offers such a download a direct infringer.

Summary of 35 U.S.C. §102 and 35 U.S.C. §103 Rejections

Due to the number of rejections at issue, the Applicant would like to summarize the key arguments discussed in more detail below. The Applicant respectfully urges that none of the cited prior art discloses a ***descriptor lookup table*** for use with a ***file access data structure***, a term defined in the specification by the Applicant. Further, none of the cited prior art references disclose ***determining a type of file access data structure***, and processing the structure differently if it is a ***critical path data structure***, another term defined in the Specification by the Applicant. Further detail in relation to specific rejections may be found below.

Claim Rejections – 35 U.S.C. §102

At paragraphs 3-5 of the Final Office Action claim 1 was rejected under 35 U.S.C. § 102(e) as being anticipated by Madnick, U. S. Patent No. 6,282,537, issued August 28th, 2001 (hereinafter Madnick).

Applicant's claim 1 sets forth:

1. A method for converting a file access data structure from a first endianness to a second endianness, the method comprising the steps of:
identifying, from a descriptor look up table, a series of actions to perform on elements of the file access data structure; and

performing the identified series of actions on the elements of the file access data structure.

Madnick discloses using a structured query language to query both structured and semi-structured data sources. Structured data sources are defined as traditional databases and semi-structured data sources are defined as data sources that do not usually respond to traditional structured queries. *See* col. 9, lines 18-23. Examples of semi-structured data sources include HTML documents, menu-driven databases, and other data files not arranged as relational databases. *See* col. 2, lines 33-41. An HTML “descriptor file” is associated with each semi-structured data source, and defines which data elements are available from the source and the actions needed to retrieve the data elements. *See* col. 10, lines 6-18 and Fig 7. When the system requests particular data, the descriptor file assists the system in retrieving the requested data. *See* col. 2, lines 41-48 and col. 10, lines 55-67.

The Applicant respectfully urges that Madnick is silent concerning the Applicant’s claimed ***“identifying, from a descriptor look up table, a series of actions to perform on elements of the file access data structure.”***

Specifically, Madnick contains no disclosure of using ***a descriptor lookup table*** with a ***file access data structure***. Instead, Madnick uses an HTML descriptor file with a “semi-structured data source,” which involves very different types of structures.

The Applicant defines ***“file access data structure”*** in the Specification at page 12, lines 8-12 (emphasis added):

By “file access data structure” it is meant data structures associated with structure-based networking or file access protocols, such as the Direct Access File System, CIFS or NFS or other protocols in which packets are sent/received in non-native byte order. File access data structures do

not include the various data structures associated with stream-based data such as that utilized by the Hypertext Transport Protocol (HTTP).

Madnick defines his semi-structured data sources as databases that are not relational, “such as World Wide Web pages (HTML documents), flat files containing data (data files containing collections of data that are not arranged as a relational database), or menu-driven database systems (sometimes referred to as "legacy" systems).” *See* col. 2, lines 33-41, and col. 9, lines 18-23.

Madnick’s semi-structured data sources may not be interpreted as ***structures associated with structure-based networking or file access protocols... in which packets are sent/received in non-native byte order.*** Indeed, Madnick is completely silent concerning the even the general topic of byte order. Accordingly, Madnick can not possibly show the Applicant’s novel claims.

For the above reasons, the Applicant respectfully urges that Madnick is legally insufficient to anticipate the present claims under 35 U.S.C. §102 because of the absence of the Applicant’s claimed novel ***“identifying, from a descriptor look up table, a series of actions to perform on elements of the file access data structure.”***

At Paragraphs 6-9 of the Final Office Action, claims 16-18 were rejected under 35 U.S.C. § 102(e) as being anticipated by Bowman-Amuah, U. S. Patent No. 6,434,568, issued August 13th, 2002 (hereinafter Bowman-Amuah).

Applicant’s claim 16, representative in part of the other rejected claims, sets forth:

16. A method for converting elements of a file access data structure from a first endianness to a second endianness, the method comprising the steps of:

***determining a type of the file access data structure;
processing, in response to the file access data structure of being
of a first type, the file access data structure along a first processing path;
processing, in response to the file access data structure being of a
second type, the file access data structure along a second processing
path.***

Bowman-Amuah discloses a communication system which uses a client to retrieve data “objects” from databases. Various retrieval, networking and translation processes are utilized to interface between the client and the databases. Some features of the disclosed system include:

- Generating reports from the data retrieved with an “identification function” that responds to “general information about the request, such as a report type.”
See col. 112, line 66 to col. 113, line 6.
- A file sharing service that has an “integrated file directory” that includes all accessible directories of the file sharing service. *See col. 59, line 47 to col. 60, line 3.*
- Debugging using a component based programming style (as opposed to object-oriented or procedural programming) that allows “a large number of potential test execution paths.” *See col. 172, lines 50-64.*

The Applicant respectfully urges that Bowman-Amuah is silent concerning the Applicant’s claimed ***“determining a type of the file access data structure”*** and ***“processing, in response to the file access data structure of being of a first type, the file access data structure along a first processing path”*** and ***“processing, in response to the file access data structure being of a second type, the file access data structure along a second processing path.”***

At paragraph 43 of the Examiner's Response to Arguments in the Final Office Action, the Examiner cites wording from a number of disparate passages in Bowman-Amuah that relate to report generation, file sharing, debugging and other diverse topics. The Applicant respectfully asserts that these disjoint passages from Bowman-Amuah bear little relation to each other and even less relation to the Applicant's invention.

For example, in paragraph 43 of the Final Office Action, the Examiner alleges Applicant's claimed "***determining a type of file access data structure***" is anticipated by Bowman-Amuah's report generator that determines a "report type" for summary reports, combined with Bowman-Amuah's "integrated file directory" of a file sharing system. See also col. 112, line 66 to col. 113, line 6, and col. 59, line 47 to col. 60, line 3. Such descriptions deals with two different aspects of Bowman-Amuah's system, and phrases describing one such aspect are not intended to modify the other. That is, a description of "types" of reports is not a disclosure of "types" of "integrated file directory."

The Applicant respectfully directs the Examiners attention to MPEP §2141.02 that provides "A prior art reference must be considered in its entirety, i.e. as a whole." Accordingly, it is improper to select isolated phases from a reference and combine them out of context.

The Applicant novelly claims ***determining a type of the file access data structure***. As discussed above, a ***file access data structure*** is a "data structure[s] associated with structure-based networking or file access protocols, such as the Direct Access File System, CIFS or NFS or other protocols in which packets are sent/received in non-native byte order" (emphasis added). Bowman-Amuah is completely silent regarding such a structure. Bowman-Amuah's "integrated file directory" is merely a root directory of a file sharing system and does not even have a "type" that may be determined. As dis-

cussed above, the description of “types” in Bowman-Amuah’s is instead related to report types, a completely different topic.

The Applicant further novelly claims *processing, in response to the file access data structure of being of a first type, the file access data structure along a first processing path* and *processing, in response to the file access data structure being of a second type, the file access data structure along a second processing path*. As Bowman-Amuah does not disclose determining a type of a file access data structure, it can not possible disclose processing in response to differing types.

Accordingly, the Applicant respectfully urges that Bowman-Amuah is legally insufficient to anticipate the present claims under 35 U.S.C. §102 because of the absence of the Applicant’s claimed novel “*determining a type of the file access data structure*” and “*processing, in response to the file access data structure of being of a first type, the file access data structure along a first processing path*” and “*processing, in response to the file access data structure being of a second type, the file access data structure along a second processing path*.”

Claim Rejections – 35 U.S.C. §103

At paragraphs 10-14 of the Final Office Action, claims 2, 11, and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Bowman-Amuah and Lee et al., U. S. Patent No. 5,867,690 issued February 2, 1999 (hereinafter Lee).

Lee discloses a system to convert data from one endian format to another endian format, where the system has a hardware byte swapping device connected between a

processor that uses one endian format and a data storage system that uses a second endian format. *See* col. 3, lines 55-66. The hardware byte swapping device swaps bytes as a stream of data passes through the device. *See* col. 3, lines 4-14. In one embodiment, a processor controls the hardware byte swapping device via a control bus that is activated by signals from the processor. *See* col. 4 lines 40-48.

Applicant's claim 2, representative in part of the other rejected claims, sets forth:

2. A method of converting elements of a file access data structure from a first endianness to a second endianness, the method comprising the steps of:

determining if the file access data structure is a critical path data structure;

converting, in response to the file access data structure being a critical path data structure, the elements from the first endianness to the second endianness using a set of specific code functions;

converting, in response to the file access data structure not being a critical path data structure, a header of the file access data structure from the first endianness to the second endianness using a second set of specific code functions; and

calling a byte swapping engine to convert selected elements of the file access data structure from the first byte order to the second byte order.

The Applicant respectfully urges that neither Bowman-Amuah nor Lee disclose the Applicant's claimed novel "*determining if the file access data structure is a critical path data structure*" and "*converting, in response to the file access data structure being a critical path data structure, the elements ... using a set of specific code functions*" and "*converting, in response to the file access data structure not being a critical path data structure, a header ... using a second set of specific code functions.*"

As a preliminary matter, the Applicant respectfully asserts that the Examiner has not accorded the term "file access data structure" its proper definition. The Applicant respectfully directs the Examiner's attention to the definition of "critical path data structure at page 12, lines 19-24 of the Specification that states (emphasis added):

The term “critical path data structures”, as used herein, is defined as *commonly utilized data structures*. For example, the DAFS header data structure is *a critical path data structure as it is utilized many times during the course of a network session*. If the DAFS data structure received is a *small* or *critical path* data structure, the structure is byte swapped using specific code functions designed for that given data structure in step 415.

Despite this definition, the Examiner states at paragraph 13 of the Office Action the Examiner states “For claims 2 and 15 the term “unimportant” is used to suggest term “non-critical.” Critical path as defined by the Applicant is related to the commonness of data structures, not to their importance, and as such this definition is improper.

Neither reference suggests *converting, in response to the file access data structure being a critical path data structure, the elements ... using a set of specific code functions* and *converting, in response to the file access data structure not being a critical path data structure, a header ... using a second set of specific code functions*, from a first endianness to a second endianness. The Examiner admits at paragraph 12 “Bowman-Amuth [sic] does not teach the use of elements of endianness and byte swapping,” and instead turns to Lee. But Lee merely discloses a hardware byte swapping device (Fig 5, item 530) that swaps bytes when triggered. Lee does not mention converting bytes differently in response to a structure being a *critical path data structure*, and is silent concerning multiple sets of *specific code functions*.

Accordingly, the Applicant respectfully urges that Bowman-Amuah in view of Lee is legally insufficient to make obvious the present claims under 35 U.S.C. §103 because of the absence of the Applicant’s claimed novel “*determining if the file access data structure is a critical path data structure*” and “*converting, in response to the file access data structure being a critical path data structure, the elements ... using a set of*

specific code functions” and “converting, in response to the file access data structure not being a critical path data structure, a header ... using a second set of specific code functions.”

At paragraphs 15 of the Final Office Action claim 3 was rejected under 35. U.S.C. § 103(a) as being unpatentable over Bowman-Amuah and Lee, in further view of Keele et al., U.S. Patent No. 5,438,674 (hereinafter Keele).

The Applicant respectfully notes that claim 3 is a dependent claim that depends from an independent claim that is believed to be in condition for allowance. Accordingly, claim 3 is believed to be in condition for allowance.

At paragraphs 16 of the Final Office Action claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Bowman-Amuah and Lee in view of McCarthy et al. U.S. Patent No. 6,321,310 issued November 20, 2001, (hereinafter McCarthy).

The Applicant respectfully notes that claim 12 is a dependent claim that depends from an independent claim that is believed to be in condition for allowance. Accordingly, Claim 12 is believed to be in condition for allowance.

At paragraphs 17-18 of the Final Office Action, Claims 13 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bowman-Amuah, Lee, and McCarthy in further view of Favor, U. S. Patent No. 5,926,642 issued July 30th, 1999, (hereinafter Favor)

The Applicant respectfully notes that claims 13 and 14 are dependent claims that depend from independent claims are believed to be in condition for allowance. Accordingly, Claims 13 and 14 are believed to be in condition for allowance.

At paragraphs 19-22 of the Final Office Action, claim 4 was rejected under 35 U.S.C. § 103 (a) as being unpatentable over the combination of Bowman-Amuah, Lee, and McCarthy.

Applicant's claim 4 sets forth:

4. A system for converting elements of a file access data structure from a first endianness to a second endianness, the system comprising:
an input buffer, the input buffer storing the file access data structure to be converted;
a byte swapping engine, the byte swapping engine operative interconnected with a descriptor table; and
an output buffer, the byte swapping engine placing the file access data structure in the output buffer after conversion.

McCarthy discloses a system for burst transfer from a memory. A spacing of data words is supplied to a memory controller, and the controller reads out a burst of data words with that spacing. A "Memory Access Table" is used to hold information relating to the location in memory where data words are stored. *See* col. 15, lines 60-67. Specifically a memory address, an extent of transfer, and a stride (interval between elements in a transfer) are stored in the table. *See* col. 16, lines 1-17.

The Applicant respectfully urges that Bowman-Amuah, Lee, and McCarthy are all silent concerning the Applicant's claimed "*a byte swapping engine, the byte swapping engine operative interconnected with a descriptor table.*"

Bowman-Amuah and Lee have no disclosure of descriptor tables. McCarthy discusses a “Memory Access Table,” that stores memory addresses and similar information. Yet there is no suggestion, in any reference, that such a Memory Access Table could have any applicability to converting a first endianness to a second endianness, or that it could be adapted for use with a byte swapping engine operative interconnected therewith.

Accordingly, the Applicant respectfully urges that the combination of Bowman-Amuah, Lee and McCarthy is legally insufficient to make obvious the present claims under 35 U.S.C. §103 because of the absence of the Applicant’s claimed novel “*a byte swapping engine, the byte swapping engine operative interconnected with a descriptor table.*”

At paragraph 23 of the Final Office Action, claim 5 was rejected as being unpatentable over Bowman-Amuah, Lee, and McCarthy, and further in view of Favor.

The Applicant respectfully notes that claim 5 is a dependent claim that depends from an independent claim that is believed to be in condition for allowance. Accordingly, claim 5 is believed to be in condition for allowance.

At paragraph 24 of the Final Office Action, claim 6 was rejected as being unpatentable over Bowman-Amuah, Lee, and McCarthy, and further in view of Keele.

The Applicant respectfully notes that claim 6 is a dependent claim that depends from an independent claim that is believed to be in condition for allowance. Accordingly, claim 6 is believed to be in condition for allowance.

At paragraphs 25-27 of the Final Office Action, claims 7 and 8 were rejected as being unpatentable over Bowman-Amuah and McCarthy.

The Applicant's claimed invention, as set forth in representative claim 7, comprises in part:

7. A method for converting a data structure from a first byte order to a second byte order, the method comprising the steps of:
 - reading an element entry from a descriptor table;
 - performing an action on an element of the data structure, the action being defined in the element entry read from the descriptor table;***
 - and
 - placing the element in an output buffer.

Bowman-Amuah and McCarthy are described above.

The Applicant respectfully urges that Bowman-Amuah and McCarthy are both silent concerning the Applicant's claimed "***performing an action on an element of the data structure, the action being defined in the element entry read from the descriptor table.***"

Bowman-Amuah is completely silent concerning descriptor tables in general. McCarthy discloses a "Memory Access Table" that stores memory addresses and similar

information. Yet, there is no suggestion to store *an action* in an *element entry read from the descriptor table*. McCarthy's table merely stores memory addresses and memory spacing information to aid in retrieval of data from a memory. There is no disclosure of storing actions to be performed on specific pieces of data.

Accordingly, the Applicant respectfully urges that the combination of Bowman-Amuah and McCarthy is legally insufficient to make obvious the present claims under 35 U.S.C. §103 because of the absence of the Applicant's claimed novel "*performing an action on an element of the data structure, the action being defined in the element entry read from the descriptor table.*"

At paragraph 28 of the Final Office Action, claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Bowman-Amuah and McCarthy and Lee.

The Applicant respectfully notes that claim 9 is a dependent claim that depends from an independent claim that is believed to be in condition for allowance. Accordingly, claim 9 is believed to be in condition for allowance.

At paragraph 29 of the Final Office Action, claim 10 was rejected under 35 U.S.C. § 103 (a) as being unpatentable over Bowman-Amuah and McCarthy, and further in view of Favor.

The Applicant respectfully notes that claim 10 is a dependent claim that depends from an independent claim that is believed to be in condition for allowance. Accordingly, claim 10 is believed to be in condition for allowance.

At paragraph 30 of the Final Office Action, claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Bowman-Amuah in view of Lee.

The Applicant respectfully notes that claim 19 is a dependent claim that depends from an independent claim that is believed to be in condition for allowance. Accordingly, claim 19 is believed to be in condition for allowance.

At Paragraph 31-35 of the Final Office Action, claims 20, 26, 32, and 33 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Madnick in view of Lee.

Applicant's claim 26, representative in part of the other rejected claims, sets forth:

26. A computer to convert a data structure, comprising:
- means for calling a byte-swapping engine;
 - means for providing a file access data structure as input to the byte-swapping engine;
 - means for providing a descriptor look up table to the byte-swapping engine;
 - means for identifying, from the descriptor look up table, a series of actions to perform on elements of the file access data structure in order to swap bytes of the file access data structure from a first endianness to a second endianness; and*
 - means for performing the identified series of actions on the elements of the file access data structure.

Madnick and Lee are described above.

The Applicant respectfully urges that Madnick and Lee are both silent concerning the Applicant's claimed "*means for identifying, from the descriptor look up table, a series of actions to perform on elements of the file access data*

structure in order to swap bytes of the file access data structure from a first endianness to a second endianness.”

Lee simply discloses a hardware byte swapper and Madnick discloses an HTML descriptor file for extracting data from semi-structured databases. There is no suggestion storing in a descriptor table *a series of actions to perform on elements of the file access data structure in order to swap bytes of the file access data structure from a first endianness to a second endianness.*

Accordingly, the Applicant respectfully urges that the combination of Madnick and Lee is legally insufficient to make obvious the present claims under 35 U.S.C. §103 because of the absence of the Applicant’s claimed novel “*means for identifying, from the descriptor look up table, a series of actions to perform on elements of the file access data structure in order to swap bytes of the file access data structure from a first endianness to a second endianness.*”

At paragraph 36 of the Final Office Action, claims 21 and 27 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Madnick and Lee in further view of Chow et al., U.S. Patent No. 6,745,310 (hereinafter Chow).

The Applicant respectfully notes that claims 21 and 27 are dependent claims that depend from independent claims that are believed to be in condition for allowance. Accordingly, claims 21 and 27 are believed to be in condition for allowance.

At paragraph 37 of the Final Office Action, claims 22, 23, 25, 28, 29, and 31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Madnick and Lee in further view of Bowman-Amuah.

The Applicant respectfully notes that claims 22, 23, 25, 28, 29, and 31 are dependent claims that depend from independent claims that are believed to be in condition for allowance. Accordingly, claims 22, 23, 25, 28, 29, and 31 are believed to be in condition for allowance.

In the event that the Examiner deems personal contact desirable in disposition of this case, the Examiner is encouraged to call the undersigned attorney at (617) 951-3078.

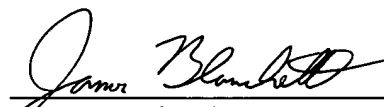
All independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims.

The Applicant respectfully solicits favorable action.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



James A. Blanchette
Reg. No. 51,477
CESARI AND MCKENNA, LLP
88 Black Falcon Avenue
Boston, MA 02210-2414
(617) 951-2500